

WHAT IS CLAIMED IS:

1. An information processing equipment that carries out  
a communication path establishment processing at the time  
when a power source is turned on, the information processing  
5 equipment comprising:

a connector that is connected with a communication  
line based on the needs;

a transmission/reception mechanism that  
transmits/receives data through said communication line  
10 connected to said connector;

a connection status deciding unit that decides whether  
said communication line has been connected to said connector  
or not; and

a control unit that controls said  
15 transmission/reception mechanism to carry out an  
initialization processing for establishing a communication  
path connected to said communication line,

wherein said control unit controls not to carry out  
the initialization processing when it has been confirmed  
20 that said communication line has not been connected to said  
connector as a result of the decision made by said connection  
status deciding unit.

2. The information processing equipment according to claim 1, wherein said transmission/reception mechanism has a plurality of operation modes having different levels of power consumption, and when the initialization processing is not carried out based on the confirmation that said communication line has not been connected to said connector as a result of the decision made by said connection status deciding unit, said control unit shifts said transmission/reception mechanism to an operation mode in which power consumption is lower.

3. The information processing equipment according to claim 1, wherein said connection status deciding unit controls said transmission/reception mechanism to transmit a predetermined test signal, measures an echo of this test signal, and compares a size of energy of the measured echo with a predetermined reference value, and when the energy of the measured echo is larger than the reference value, said connection status deciding unit decides that said communication line has not been decided.

4. The information processing equipment according to claim 1, wherein said connection status deciding unit comprises a detecting switch that mechanically detects a connection of said communication line to said connector,

and a deciding circuit that decides a connection status of said communication line based on a result of the detection by the detecting switch.

- 5 5. An information processing equipment that carries out a communication path establishment processing at the time when a power source is turned on, the information processing equipment comprising:

10 a transmission/reception mechanism that transmits/receives data through a communication line; and  
a control unit that controls said transmission/reception mechanism to repeat an initialization processing with a prescribed number separately determined as an upper limit, thereby to try to  
15 establish a communication path,

wherein said control unit determines the prescribed number according to a cause of a past failure in the initialization processing and/or a status of a power source at that time.

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6. An information processing equipment that carries out a communication path establishment processing at the time when a power source is turned on, the information processing equipment comprising:

25 a transmission/reception mechanism that

transmits/receives data through a communication line; and  
a control unit that controls said  
transmission/reception mechanism to carry out an  
initialization processing thereby to try to establish a  
5 communication path, and when the communication path  
establishment has been a failure, that tries to establish  
a communication path again after a lapse of a waiting period  
determined separately, wherein said control unit determines  
a length of the waiting period according to a cause of a  
10 past failure in the initialization processing and/or a status  
of a power source at that time.

7. A signal conversion equipment that converts a  
transmission data signal input from a communication control  
15 unit prepared separately, transmits a converted signal  
through a communication line, and receives the signal  
transmitted through said communication line, converts this  
signal, and outputs the converted signal to said  
communication control unit, under a control of said  
20 communication control unit, the signal conversion equipment  
comprising: a connector connected with said communication  
line according to the needs; a transmission/reception  
mechanism that transmits/receives data through said  
communication line connected to said connector; a detecting  
25 switch that mechanically detects whether said communication

line has been connected to said connector or not; and a deciding circuit that decides on the connection status based on a result of the detection carried out by the detecting switch, and outputs a predetermined signal showing a result of the decision to said communication control unit.

8. The signal conversion equipment according to claim 7, wherein said transmission/reception mechanism has a plurality of operation modes having different levels of power consumption, and this operation mode is changed based on an instruction from said communication control unit.

9. A signal conversion equipment that converts to match a communication line a transmission data signal input from a communication control unit prepared separately, transmits a converted signal through said communication line, and receives the signal transmitted through said communication line, converts this signal to match said communication control unit, and outputs the converted signal to said communication control unit, under a control of said communication control unit, the signal conversion equipment comprising: a connector connected with said communication line according to the needs; a transmission/reception mechanism that transmits/receives data through said communication line connected to said connector; a detecting

switch that mechanically detects whether said communication line has been connected to said connector or not; a memory that can be accessed from said communication control unit; and a deciding circuit that decides on the connection status based on a result of the detection carried out by the detecting switch, and outputs a result of the decision to the memory.

10. The signal conversion equipment according to claim 9, wherein said transmission/reception mechanism has a plurality of operation modes having different levels of power consumption, and this operation mode is changed based on an instruction from said communication control unit.

11. A communication method that tries to keep a status that a communication path is normally connected by suitably carrying out an initialization processing for establishing a communication path, wherein whether a communication line has been connected or not is confirmed, and when it has been confirmed that said communication line has not been connected, the initialization processing is not carried out.

12. The communication method according to claim 11, wherein the confirmation is carried out such that a predetermined tone signal is transmitted, and an echo of this tone signal is measured, and when the size of energy

of this echo is larger than a predetermined value, a decision is made that said communication line has not been connected.

13. The communication method according to claim 11,  
5 wherein the confirmation is carried out based on a result of a mechanical detection of a connection status of said communication line.

14. A communication method that tries to establish a  
10 communication path by repeating an initialization processing for establishing a communication path with a prescribed number separately determined as an upper limit, wherein the prescribed number is determined according to a cause of a past failure in the initialization processing  
15 and/or a status of a power source at that time.

15. A communication method that tries to establish a communication path by carrying out a predetermined initialization processing, and when the establishment has  
20 been a failure, the establishment of a communication path is tried again after a lapse of a waiting period separately determined, wherein the waiting period is determined according to a cause of a past failure in the initialization processing and a status of a power source at that time.

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16. A computer readable medium for storing instructions,  
which when executed on a computer, causes the computer to  
realize a communication method that tries to keep a status  
that a communication path is normally connected by suitably  
5 carrying out an initialization processing for establishing  
a communication path, wherein whether a communication line  
has been connected or not is confirmed, and when it has been  
confirmed that said communication line has not been connected,  
the initialization processing is not carried out.

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17. A computer readable medium for storing instructions,  
which when executed on a computer, causes the computer to  
realize a communication method that tries to establish a  
communication path by repeating an initialization  
15 processing for establishing a communication path with a  
prescribed number separately determined as an upper limit,  
wherein the prescribed number is determined according to  
a cause of a past failure in the initialization processing  
and/or a status of a power source at that time.

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18. A computer readable medium for storing instructions,  
which when executed on a computer, causes the computer to  
realize a communication method that tries to establish a  
communication path by carrying out a predetermined  
25 initialization processing, and when the establishment has



been a failure, the establishment of a communication path is tried again after a lapse of a waiting period separately determined, wherein the waiting period is determined according to a cause of a past failure in the initialization processing and a status of a power source at that time.

19. A computer program for causing the computer to realize a communication method that tries to keep a status that a communication path is normally connected by suitably carrying out an initialization processing for establishing a communication path, wherein whether a communication line has been connected or not is confirmed, and when it has been confirmed that said communication line has not been connected, the initialization processing is not carried out.

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20. A computer program for causing the computer to realize a communication method that tries to establish a communication path by repeating an initialization processing for establishing a communication path with a prescribed number separately determined as an upper limit, wherein the prescribed number is determined according to a cause of a past failure in the initialization processing and/or a status of a power source at that time.

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21. A computer program for causing the computer to realize  
a communication method that tries to establish a  
communication path by carrying out a predetermined  
initialization processing, and when the establishment has  
5 been a failure, the establishment of a communication path  
is tried again after a lapse of a waiting period separately  
determined, wherein the waiting period is determined  
according to a cause of a past failure in the initialization  
processing and a status of a power source at that time.